

Name :- Khanpara Prit

Enrollment No :- 23SOECE11057

Roll No :- CE - 15

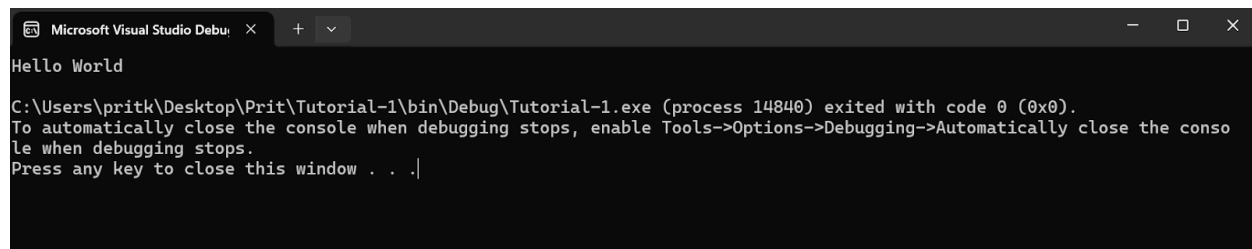
1 : Write a program to print “Hello World”.

Code:-

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;

namespace Tutorial_1
{
    internal class Program
    {
        static void Main(string[] args)
        {
            Console.WriteLine("Hello World");
        }
    }
}
```

output:-



```
Microsoft Visual Studio Debug Console
Hello World
C:\Users\prith\Desktop\Prit\Tutorial-1\bin\Debug\Tutorial-1.exe (process 14840) exited with code 0 (0x0).
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the console when debugging stops.
Press any key to close this window . . .|
```

2 : Design your profile page as given below.

Name: your name

DOB: 15/10/1991

Address: 4, xyz society , Kalawad Road

City: Rajkot

Pincode: 360 001

State: Gujarat

Country: India

Email: abc@ymail.com

Code:-

using System;

class Program

{

static void Main()

{

Console.WriteLine("Name:Khanpara Prit");

Console.WriteLine("DOB: 20/01/2006");

Console.WriteLine("Address: 4, xyx society,Kalawad Road");

Console.WriteLine("City: Rajkot");

Console.WriteLine("Pincode: 360001");

Console.WriteLine("State: Gujarat");

Console.WriteLine("Country: India");

Console.WriteLine("Email:khanparaprit@gmail.com");

```
}  
}
```

output:-

A screenshot of the Microsoft Visual Studio Debug Console window. The window title is "Microsoft Visual Studio Debug Console". The output text is as follows:
Name:Khanpara Prit
DOB: 20/01/2006]
Address: 4, xyx society,Kalawad Road
City: Rajkot
Pincode: 360001
State: Gujarat
Country: India
Email:khanparaprit@gmail.com

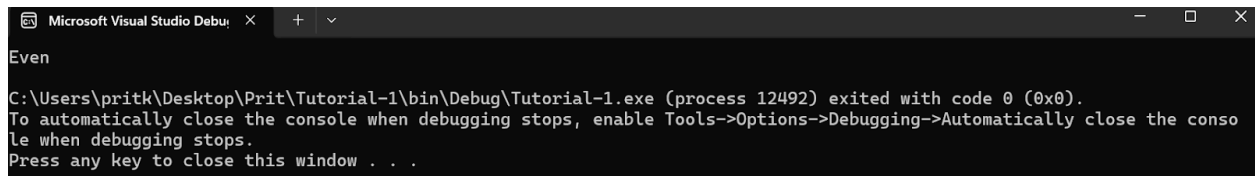
C:\Users\prith\Desktop\Prit\ConsoleApp1\bin\Debug\ConsoleApp1.exe (process 15100) exited with code 0 (0x0).
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the console when debugging stops.
Press any key to close this window . . .

3 : Find out whether the given number is odd or even.

Code:-

```
using System;  
using System.Collections.Generic;  
using System.Linq;  
using System.Text;  
using System.Threading.Tasks;  
  
namespace Tutorial_1  
{  
    internal class Program  
    {  
        static void Main(string[] args)  
        {  
            int num = 10;  
            if (num % 2 == 0)  
                Console.WriteLine("Even");  
            else  
                Console.WriteLine("Odd");  
        }  
    }  
}
```

output:-

A screenshot of the Microsoft Visual Studio Debug Console window. The window title is "Microsoft Visual Studio Debug Console". The text inside the console shows the output of a program: "Even", followed by a message indicating the program has exited with code 0 (0x0). It also provides instructions on how to automatically close the console when debugging stops and prompts the user to press any key to close the window.

```
Microsoft Visual Studio Debug Console
Even
C:\Users\prirk\Desktop\Prit\Tutorial-1\bin\Debug\Tutorial-1.exe (process 12492) exited with code 0 (0x0).
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the console when debugging stops.
Press any key to close this window . . .
```

4 : Rearrange the given code to correct the program. The resultant program will be to input a number and print whether the given number is odd or even.

```
namespace ConsoleApplication1
{
    {
        static void Main(string[] args)
        {
            int x;

            Console.WriteLine("Enter Number : ");
            x = Convert.ToInt32(str);
            Console.WriteLine("Number is Even");
            else
            Console.Read(); string str = Console.ReadLine();
            if (x % 2 == 0)
            Console.WriteLine("Number is Odd");
        }
    }
}

class Program
```

```
using System;
```

Output:

Enter Number: 10

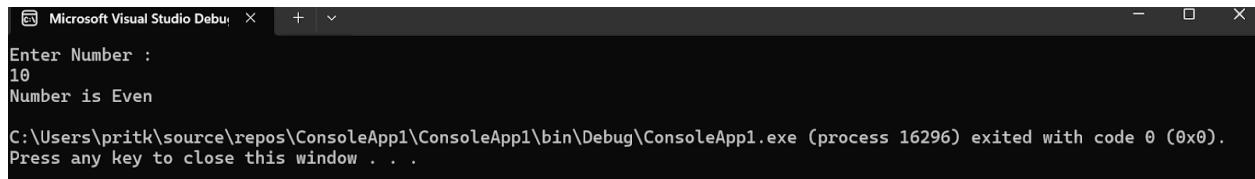
Number is Even

Code:-

```
using System;
using System.Collections.Generic;
using System.Linq;
using System.Text;
using System.Threading.Tasks;
namespace ConsoleApp1
{
    internal class Program
    {
        static void Main(string[] args)
        {
            Console.WriteLine("Enter Number : ");
            string str = Console.ReadLine();
            int x = Convert.ToInt32(str);
            if (x % 2 == 0)
                Console.WriteLine("Number is Even");
            else
                Console.WriteLine("Number is Odd");
        }
    }
}
```

```
}  
}
```

output:-



```
Microsoft Visual Studio Debug Console  
Enter Number :  
10  
Number is Even  
C:\Users\prirk\source\repos\ConsoleApp1\ConsoleApp1\bin\Debug\ConsoleApp1.exe (process 16296) exited with code 0 (0x0).  
Press any key to close this window . . .
```

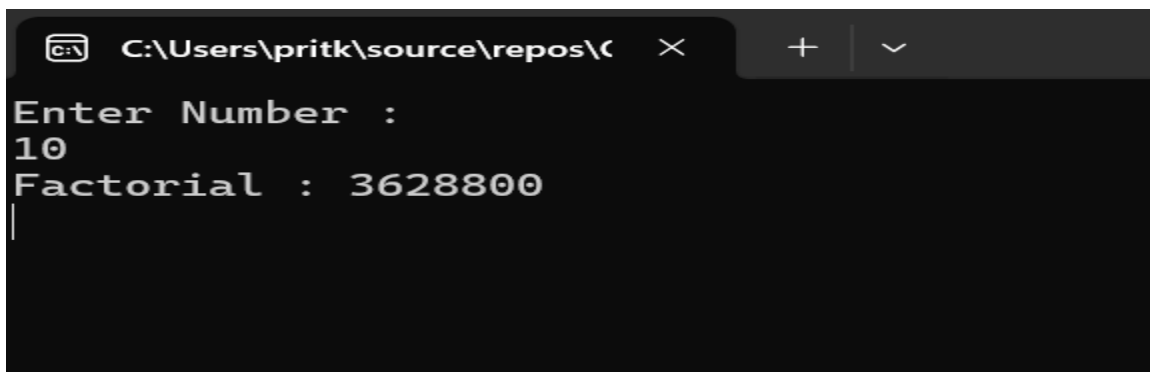
5 : Write output of the program. Also write comment for each line for the following code.

```
using System;  
  
namespace ConsoleApplication1  
{  
    class Program  
    {  
        static void Main(string[] args)  
        {  
            int n,fact=1;  
  
            Console.WriteLine("Enter Number : ");  
  
            string str = Console.ReadLine();  
  
            n = Convert.ToInt32(str);  
  
            for (int i = 1; i <= n; i++)  
            {  
                fact = fact * i;  
            }  
  
            Console.WriteLine("Factorial : {0}",fact);  
        }  
    }  
}
```

```
        Console.Read();  
    }  
}
```

Code:-

```
using System;  
  
namespace ConsoleApplication1  
{  
    class Program  
    {  
        static void Main(string[] args)  
        {  
            int n, fact = 1;  
            Console.WriteLine("Enter Number : "); // prompt  
            string str = Console.ReadLine(); // take input  
            n = Convert.ToInt32(str); // convert to int  
            for (int i = 1; i <= n; i++) // loop from 1 to n  
            {  
                fact = fact * i; // multiply  
            }  
            Console.WriteLine("Factorial : {0}", fact); // output  
            Console.Read(); // hold screen  
        }  
    }  
}
```



The screenshot shows a Windows console application window with the title bar 'C:\Users\pritrk\source\repos\...' and standard window controls. The console output displays the prompt 'Enter Number :', the user input '10', and the calculated result 'Factorial : 3628800'. A cursor is visible on the line following the output.

```
C:\Users\pritrk\source\repos\...  
Enter Number :  
10  
Factorial : 3628800  
|
```

6 : Write missing statement to get the desired output.

```
using System;
```

```
namespace ConsoleApplication1
```

```
{
```

```
    class Program
```

```
    {
```

```
        static void Main(string[] args)
```

```
        {
```

```
            int a,b,c,result;
```

```
            Console.Write("Enter Number 1: ");
```

```
//Missing statement
```

```
            a = Convert.ToInt32(str);
```

```
            Console.Write("Enter Number 2 : ");
```

```
//Missing statement
```

```
            b = Convert.ToInt32(str);
```

```
            Console.Write("Enter Number 3 : ");
```

```
            str = Console.ReadLine();
```

```
//Missing statement
```

```
            result = Sum(a, b, c);
```

```
//Missing statement
```

```
            Console.Read();
```

```
        }
```



```

        static int Sum(int x, int y, int z)
        {
            int res;
            res = x+y+z;
            return res;
        }
    }
}

```

Output:

Enter Number 1 : 10

Enter Number 2 : 20

Enter Number 3 : 30

Sum : 60

Code:-

```
using System;
```

```
namespace ConsoleApplication1
```

```
{
```

```
    class Program
```

```
    {
```

```
        static void Main(string[] args)
```

```
        {
```

```
            int a, b, c, result;
```

```

                Console.Write("Enter Number 1: ");

```

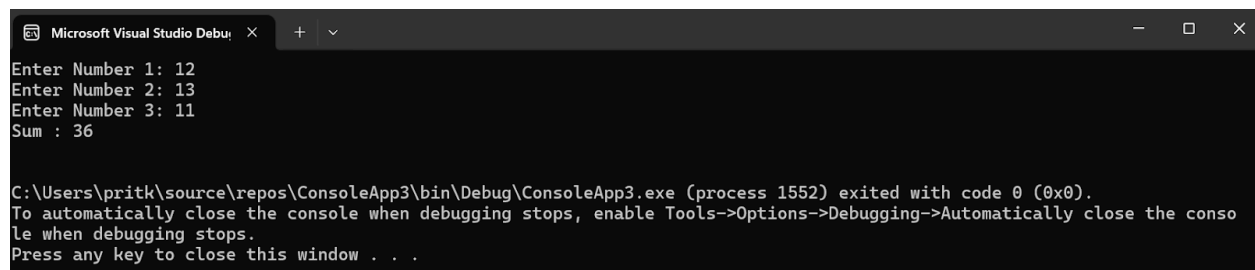
```

        string str = Console.ReadLine(); // MISSING
        a = Convert.ToInt32(str);
        Console.Write("Enter Number 2: ");
        str = Console.ReadLine(); // MISSING
        b = Convert.ToInt32(str);
        Console.Write("Enter Number 3: ");
        str = Console.ReadLine();
        c = Convert.ToInt32(str); // MISSING
        result = Sum(a, b, c);
        Console.WriteLine("Sum : {0}", result); // MISSING
        Console.Read();
    }

    static int Sum(int x, int y, int z)
    {
        return x + y + z;
    }
}
}

```

output:-



```

Microsoft Visual Studio Debug
Enter Number 1: 12
Enter Number 2: 13
Enter Number 3: 11
Sum : 36

C:\Users\pritrk\source\repos\ConsoleApp3\bin\Debug\ConsoleApp3.exe (process 1552) exited with code 0 (0x0).
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the console when debugging stops.
Press any key to close this window . . .

```

7 : Predict and write the output of the given code.

Code:-

```
using System;
namespace While_Loop
{
    class Program
    {
        static void Main(string[] args)
        {
            int num1,res, i;

            Console.WriteLine("Enter a number");
            num1 = Convert.ToInt32(Console.ReadLine());
            i = 1; //Initialization

            //Check whether condition matches or not
            while (i <= 10)
            {
                res = num1 * i;
                Console.WriteLine("{0} x {1} = {2}", num1, i, res);

                i++; //Increment by one
            }
            Console.ReadLine();
        }
    }
}
```

Output:-



```
Enter a number
11
11 x 1 = 11
11 x 2 = 22
11 x 3 = 33
11 x 4 = 44
11 x 5 = 55
11 x 6 = 66
11 x 7 = 77
11 x 8 = 88
11 x 9 = 99
11 x 10 = 110
```

8 Write a program to convert given name in upper characters.

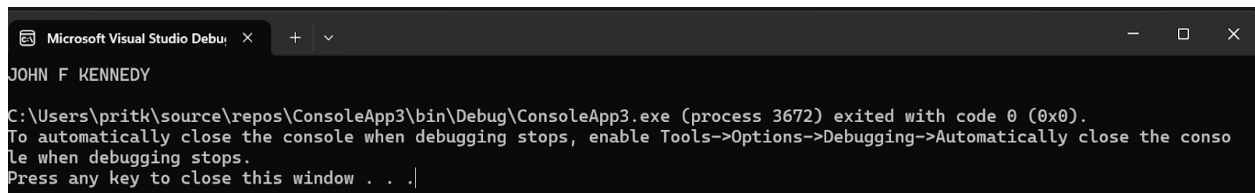
INPUT : John F Kennedy

OUTPUT: JOHN F KENNEDY

Code:-

```
using System;
namespace While_Loop
{
    class Program
    {
        static void Main(string[] args)
        {
            string name = "John F Kennedy";
            Console.WriteLine(name.ToUpper());
        }
    }
}
```

output:-



9 Write a Program to convert given name in toggle case.

INPUT : JoHn F kEnNedy

OUTPUT: jOhN f KeNneDY

Code:-

```
using System;
namespace While_Loop
{
    class Program
    {
        static void Main(string[] args)
        {
            string input = "JoHn F kEnNedy";
```

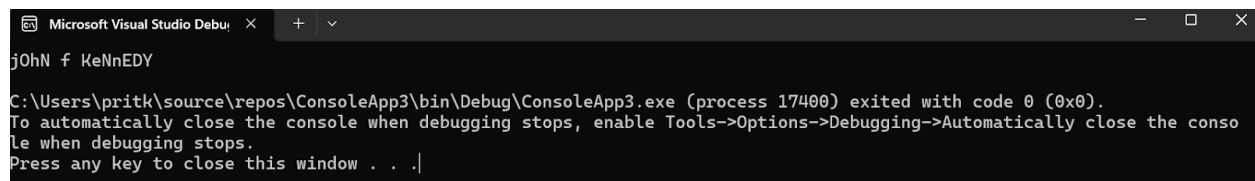
```

        string result = "";
        foreach (char c in input)
        {
            if (char.IsUpper(c))
                result += char.ToLower(c);
            else
                result += char.ToUpper(c);
        }

        Console.WriteLine(result);
    }
}

```

output:-



10 Write a Program which accepts mobile no as a string from the user and converts the last 5 digits into X.

INPUT : 1234567890

OUTPUT: 12345XXXXX

Code:-

```

using System;
namespace While_Loop
{
    class Program
    {
        static void Main(string[] args)
        {
            string mobile = "1234567890";
            string masked = mobile.Substring(0, 5) + "XXXXX";
        }
    }
}

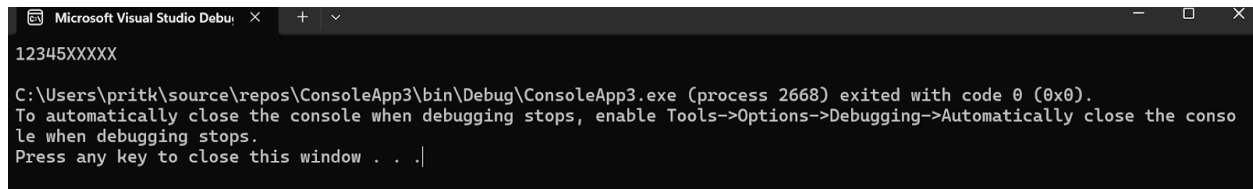
```

```

        Console.WriteLine(masked);
    }
}

```

output:-



```

Microsoft Visual Studio Debug Console
12345XXXX
C:\Users\prtk\source\repos\ConsoleApp3\bin\Debug\ConsoleApp3.exe (process 2668) exited with code 0 (0x0).
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the console when debugging stops.
Press any key to close this window . . .

```

11. Write a Program which accepts name and gender from the user. Here, gender may have only 1 character, M or F.

Based on the gender prefix the name Mr. & Ms.

NAME : Hillary Clinton

GENDER : F

Code:-

```

using System;
namespace While_Loop
{
    class Program
    {
        static void Main(string[] args)
        {
            Console.Write("Enter Name: ");
            string name = Console.ReadLine();
            Console.Write("Enter Gender (M/F): ");
            char gender = Convert.ToChar(Console.ReadLine());
            if (gender == 'M')
                Console.WriteLine("Mr. " + name);
            else if (gender == 'F')
                Console.WriteLine("Ms. " + name);
        }
    }
}

```

output:-

```
Microsoft Visual Studio Debu x + v
Enter Name: prit khanpara
Enter Gender (M/F): M
Mr. prit khanpara

C:\Users\prtk\source\repos\ConsoleApp3\bin\Debug\ConsoleApp3.exe (process 1368) exited with code 0 (0x0).
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the conso
le when debugging stops.
Press any key to close this window . . .|
```

12 Write a Program which accepts name from the user and prints the same.

INPUT : Winston Churchill

OUTPUT: Winston Churchill

Code:-

```
using System;
namespace While_Loop
{
    class Program
    {
        static void Main(string[] args)
        {
            Console.Write("Enter Name: ");
            string name = Console.ReadLine();
            Console.WriteLine(name);
        }
    }
}
```

output:-

```
Microsoft Visual Studio Debu x + v
Enter Name: Prit Khanpara
Prit Khanpara

C:\Users\prtk\source\repos\ConsoleApp3\bin\Debug\ConsoleApp3.exe (process 620) exited with code 0 (0x0).
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the conso
le when debugging stops.
Press any key to close this window . . .
```

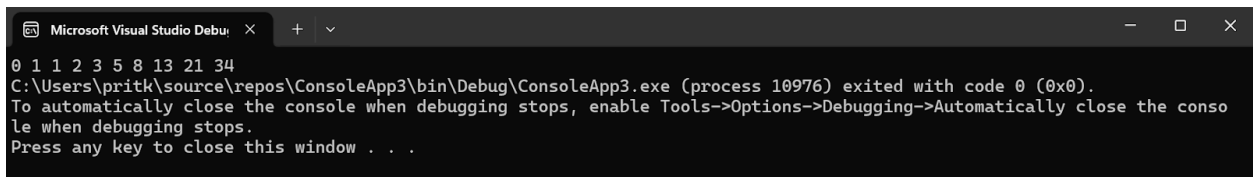
13 Write a Program to prints the following series.

0 1 1 2 3 5 8 13 21 34 55

Code:-

```
using System;
namespace While_Loop
{
    class Program
    {
        static void Main(string[] args)
        {
            int a = 0, b = 1, c, count = 10;
            Console.Write(a + " " + b + " ");
            for (int i = 2; i < count; i++)
            {
                c = a + b;
                Console.Write(c + " ");
                a = b;
                b = c;
            }
        }
    }
}
```

output:-



The screenshot shows a Windows-style window titled "Microsoft Visual Studio Debug Console". The window has a dark background with white text. The first line of output is "0 1 1 2 3 5 8 13 21 34". Below this, there are three lines of system messages: "C:\Users\prithk\source\repos\ConsoleApp3\bin\Debug\ConsoleApp3.exe (process 10976) exited with code 0 (0x0).", "To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the console when debugging stops.", and "Press any key to close this window . . .".

14 Write a Program which accepts no from the user and print the same in words.

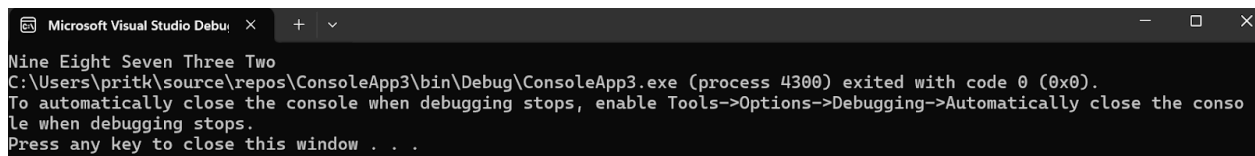
INPUT : 98732

OUTPUT: Nine Eight Seven Three Two

Code:-

```
using System;
namespace While_Loop
{
    class Program
    {
        static void Main(string[] args)
        {
            string[] words = { "Zero", "One", "Two", "Three", "Four", "Five", "Six", "Seven",
            "Eight", "Nine" };
            string number = "98732";
            foreach (char digit in number)
            {
                Console.Write(words[digit - '0'] + " ");
            }
        }
    }
}
```

output:-



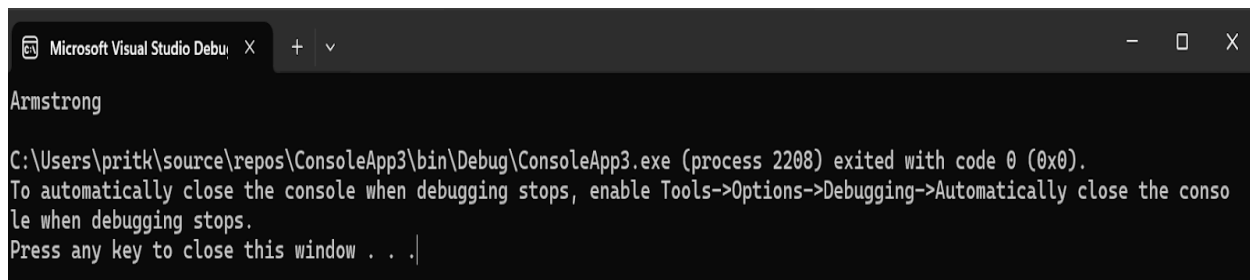
The screenshot shows a Visual Studio Debug Console window. The title bar reads "Microsoft Visual Studio Debug". The console output displays the text "Nine Eight Seven Three Two" on the first line. Subsequent lines show a message from the operating system: "C:\Users\pritrk\source\repos\ConsoleApp3\bin\Debug\ConsoleApp3.exe (process 4300) exited with code 0 (0x0). To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the console when debugging stops. Press any key to close this window . . .".

15. Write a Program to check whether the given no is Armstrong no or not.

Code:-

```
using System;
namespace While_Loop
{
    class Program
    {
        static void Main(string[] args)
        {
            int num = 153;
            int sum = 0, temp = num;
            while (temp > 0)
            {
                int digit = temp % 10;
                sum += digit * digit * digit;
                temp /= 10;
            }
            Console.WriteLine(sum == num ? "Armstrong" : "Not Armstrong");
        }
    }
}
```

output:-



```
Microsoft Visual Studio Debug Console
+ v
Armstrong
C:\Users\pritrk\source\repos\ConsoleApp3\bin\Debug\ConsoleApp3.exe (process 2208) exited with code 0 (0x0).
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the console when debugging stops.
Press any key to close this window . . .|
```

16. Write a program to display a pattern like a right angle triangle using an asterisk

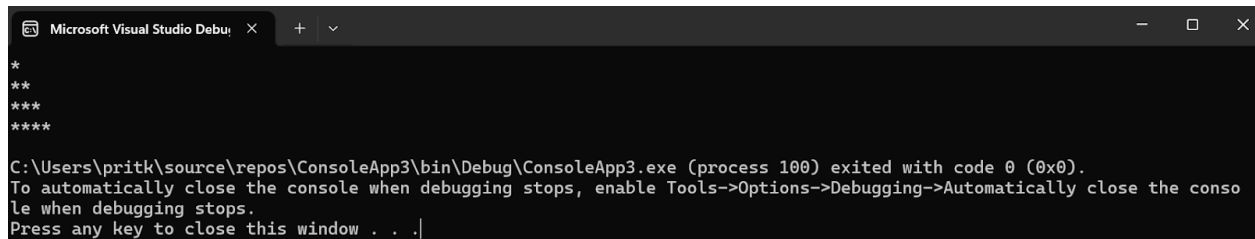
The pattern like :

```
*  
  
* *  
  
* * *  
  
* * * *
```

Code:-

```
using System;  
namespace While_Loop  
{  
    class Program  
    {  
        static void Main(string[] args)  
        {  
            for (int i = 1; i <= 4; i++)  
            {  
                for (int j = 1; j <= i; j++)  
                {  
                    Console.Write("*");  
                    Console.WriteLine();  
                }  
            }  
        }  
    }  
}
```

output:-



```
Microsoft Visual Studio Debug Console
*
**
***
****
C:\Users\prithk\source\repos\ConsoleApp3\bin\Debug\ConsoleApp3.exe (process 100) exited with code 0 (0x0).
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the console when debugging stops.
Press any key to close this window . . .
```

17. Write a Program to generate following output.

```
1
1 2
1 2 3
1 2 3 4
```

Code:-

```
using System;

namespace While_Loop
{
    class Program
    {
        static void Main(string[] args)
        {
            for (int i = 1; i <= 4; i++)
            {
                for (int j = 1; j <= i; j++)
                {
                    Console.Write(j + " ");
                }
                Console.WriteLine();
            }
        }
    }
}
```

```

    }
}
}
}
}

```

output:-

```

1
1 2
1 2 3
1 2 3 4
C:\Users\prtk\source\repos\ConsoleApp3\bin\Debug\ConsoleApp3.exe (process 17200) exited with code 0 (0x0).
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the console when debugging stops.
Press any key to close this window . . . |

```

18 Write a program to make such a pattern like a right angle triangle with the number increased by 1.

The pattern like :

```

1
2 3
4 5 6
7 8 9 10

```

Code:-

```

using System;

namespace While_Loop
{
    class Program

```

```

{
    static void Main(string[] args)
    {
        int num = 1;
        for (int i = 1; i <= 4; i++)
        {
            for (int j = 1; j <= i; j++)
                Console.Write(num++ + " ");
            Console.WriteLine();
        }
    }
}

```

output:-

```

1
2 3
4 5 6
7 8 9 10
C:\Users\pritrk\source\repos\ConsoleApp3\bin\Debug\ConsoleApp3.exe (process 14744) exited with code 0 (0x0).
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the console when debugging stops.
Press any key to close this window . . .

```

19. Write a program to make such a pattern as a pyramid with an asterisk.

```

*

* *

* * *

* * * *

```

Code:-

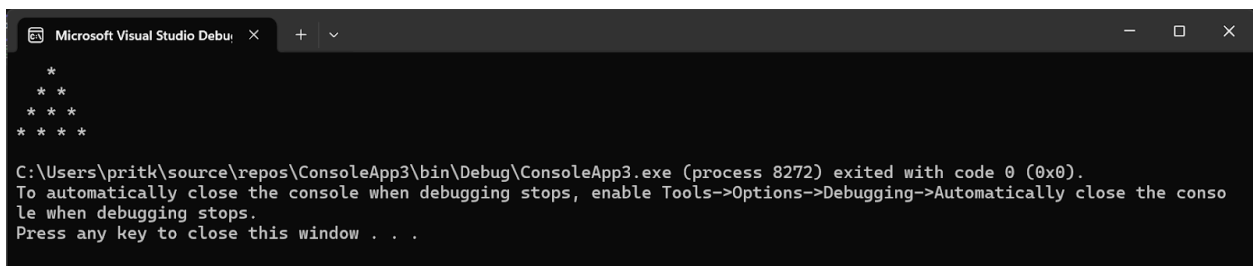
```
using System;

namespace While_Loop
{
    class Program
    {
        static void Main(string[] args)
        {
            int n = 4;
            for (int i = 1; i <= n; i++)
            {
                Console.Write(new string(' ', n - i));

                for (int j = 1; j <= i; j++)
                {
                    Console.Write("* ");
                }

                Console.WriteLine();
            }
        }
    }
}
```

output:-



The screenshot shows the Microsoft Visual Studio Debug Console window. The title bar reads "Microsoft Visual Studio Debug Console". The console output displays a pattern of asterisks forming a right-angled triangle, followed by a message indicating the program has exited successfully.

```
*
* *
* * *
* * * *
```

C:\Users\prithk\source\repos\ConsoleApp3\bin\Debug\ConsoleApp3.exe (process 8272) exited with code 0 (0x0).
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the console when debugging stops.
Press any key to close this window . . .

20. Write a program to make a pyramid pattern with numbers increased by 1.

```
1
2 3
4 5 6
7 8 9 10
```

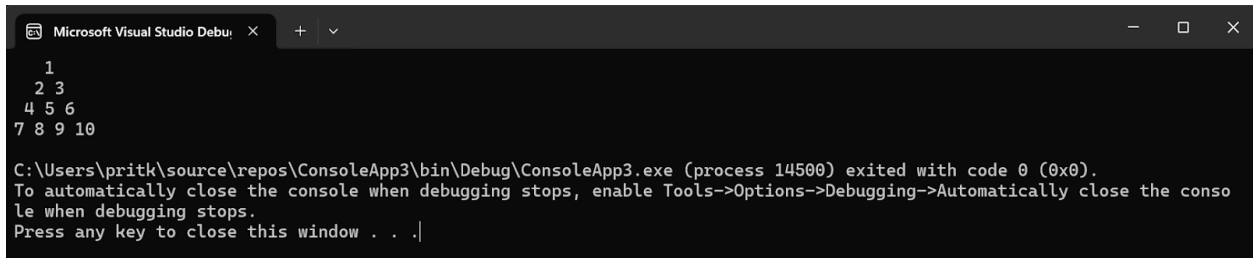
Code:-

```
using System;
namespace While_Loop
{
    class Program
    {
        static void Main(string[] args)
        {
            int num = 1;
            int rows = 4;
            for (int i = 1; i <= rows; i++)
            {
                Console.Write(new string(' ', rows - i));
                for (int j = 1; j <= i; j++)
                {
                    Console.Write(num++ + " ");
                }
                Console.WriteLine();
            }
        }
    }
}
```



```
}
```

output:-



```
Microsoft Visual Studio Debug Console
1
2 3
4 5 6
7 8 9 10
C:\Users\prtk\source\repos\ConsoleApp3\bin\Debug\ConsoleApp3.exe (process 14500) exited with code 0 (0x0).
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the console when debugging stops.
Press any key to close this window . . .|
```

21. Write a program to find the sum of the series $5 + 55 + 555 + 5555 + \dots$ n terms.

Test Data :

Input the number of terms : 4

Input number : 5

Expected Output :

5 + 55 + 555 + 5555

The Sum is : 6170

Code:-

```
using System;

namespace While_Loop
{
    class Program
    {
        static void Main(string[] args)
        {
            int n = 4, num = 5, term = 0, sum = 0;

            for (int i = 1; i <= n; i++)
            {
                term = term * 10 + num;
```

```

        Console.Write(term + (i < n ? " + " : "\n"));

        sum += term;
    }

    Console.WriteLine("The Sum is : " + sum);
}

}

}

```

output:-

```

Microsoft Visual Studio Debug Console
5 + 55 + 555 + 5555
The Sum is : 6170
C:\Users\prtk\source\repos\ConsoleApp3\bin\Debug\ConsoleApp3.exe (process 2540) exited with code 0 (0x0).
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the console when debugging stops.
Press any key to close this window . . .

```

22. Write a program to display a pattern like a diamond.

```

*

***

*****

*****

*****

*****

*****

***

*

```

Code:-

```
using System;
class Program
{
    static void Main()
    {
        int n = 5; // maximum number of stars in the middle line

        // Upper half of the diamond
        for (int i = 1; i <= n; i++)
        {
            // Print leading spaces
            for (int j = i; j < n; j++)
                Console.Write(" ");

            // Print stars
            for (int j = 1; j <= (2 * i - 1); j++)
                Console.Write("*");

            Console.WriteLine();
        }

        // Lower half of the diamond
        for (int i = n - 1; i >= 1; i--)
        {
            // Print leading spaces
            for (int j = n; j > i; j--)
                Console.Write(" ");

            // Print stars
            for (int j = 1; j <= (2 * i - 1); j++)
```

```
        Console.Write("**");  
        Console.WriteLine();  
    }  
}  
}
```

output:-



```
Microsoft Visual Studio Debug Console  
*  
***  
*****  
*****  
*****  
*****  
*****  
*****  
***  
*  
C:\Users\prirk\source\repos\ConsoleApp3\bin\Debug\ConsoleApp3.exe (process 1548) exited with code 0 (0x0).  
To automatically close the console when debugging stops, enable Tools->Options->Debugging->Automatically close the console when debugging stops.  
Press any key to close this window . . .|
```